

FIG. 1

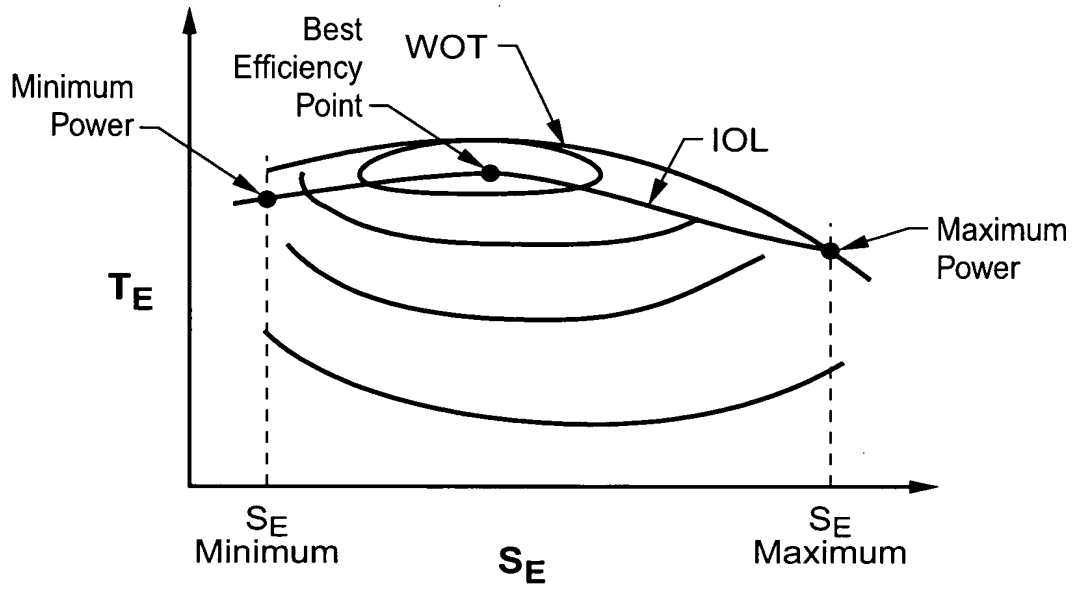


FIG. 2

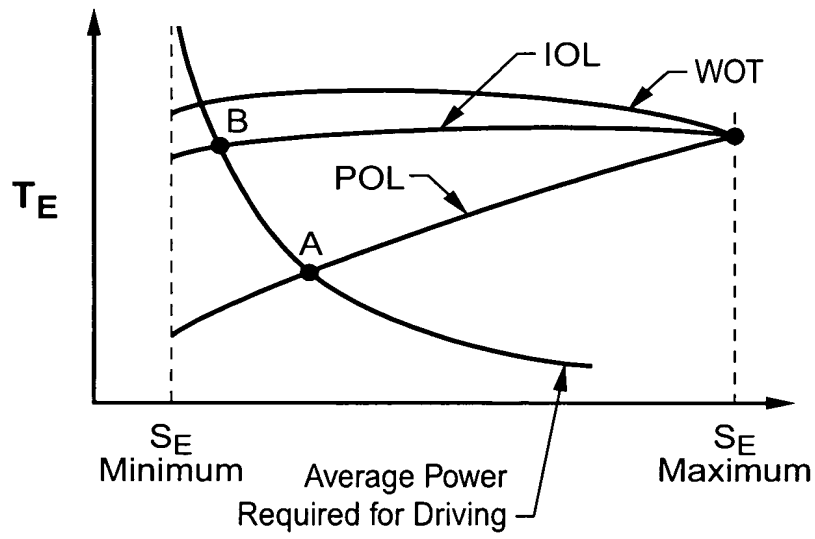


FIG. 3

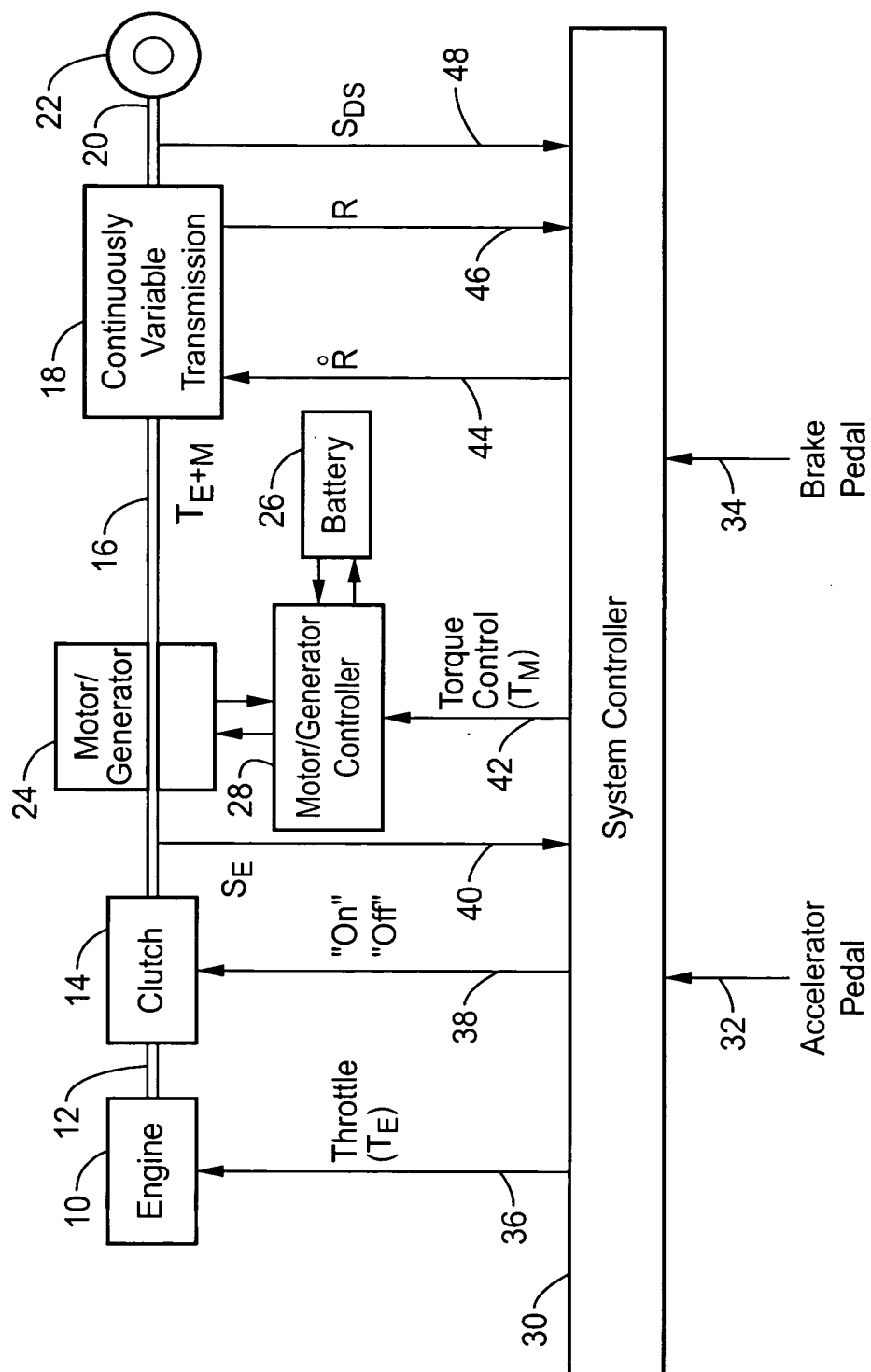


FIG. 4

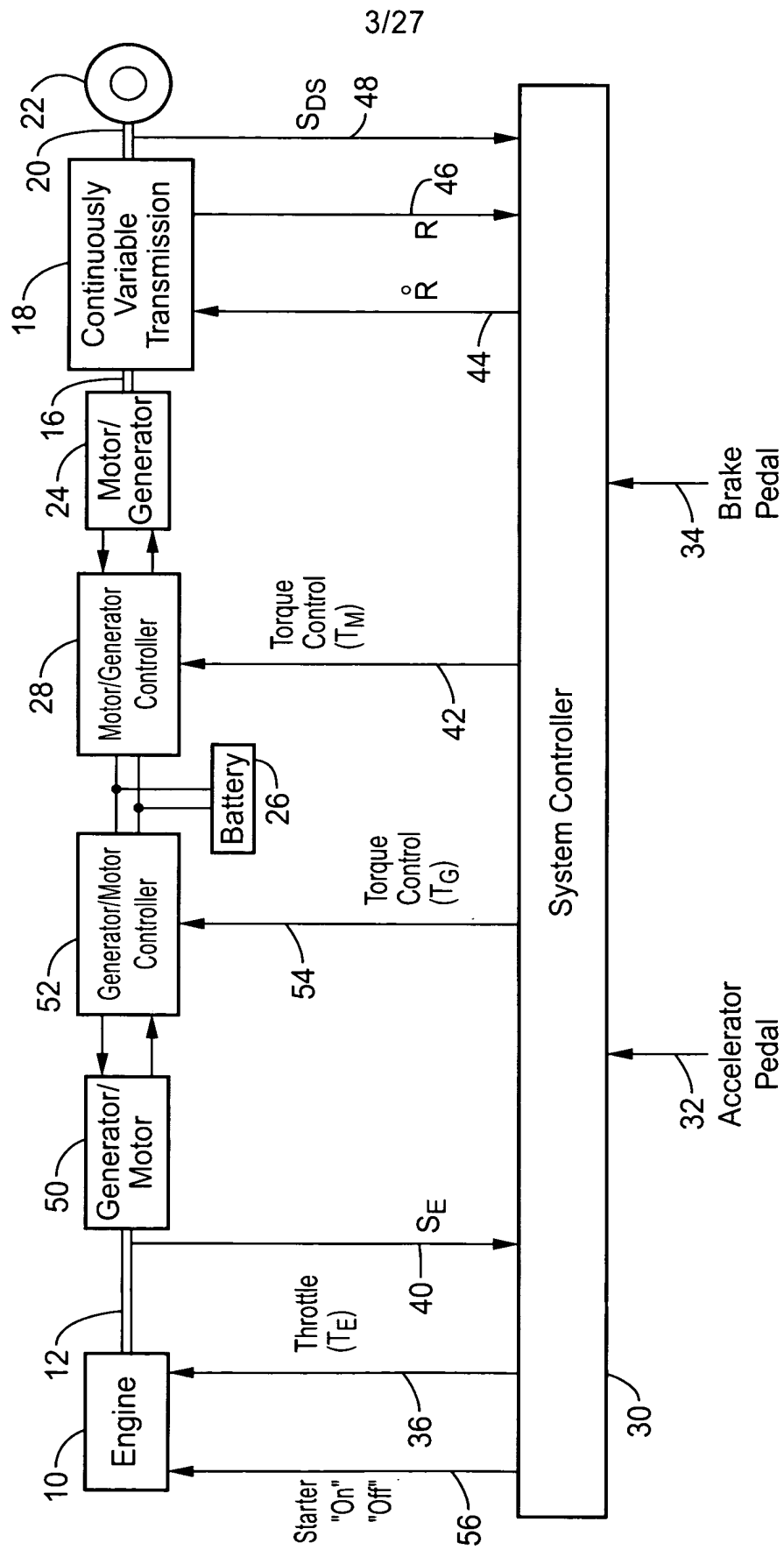


FIG. 5

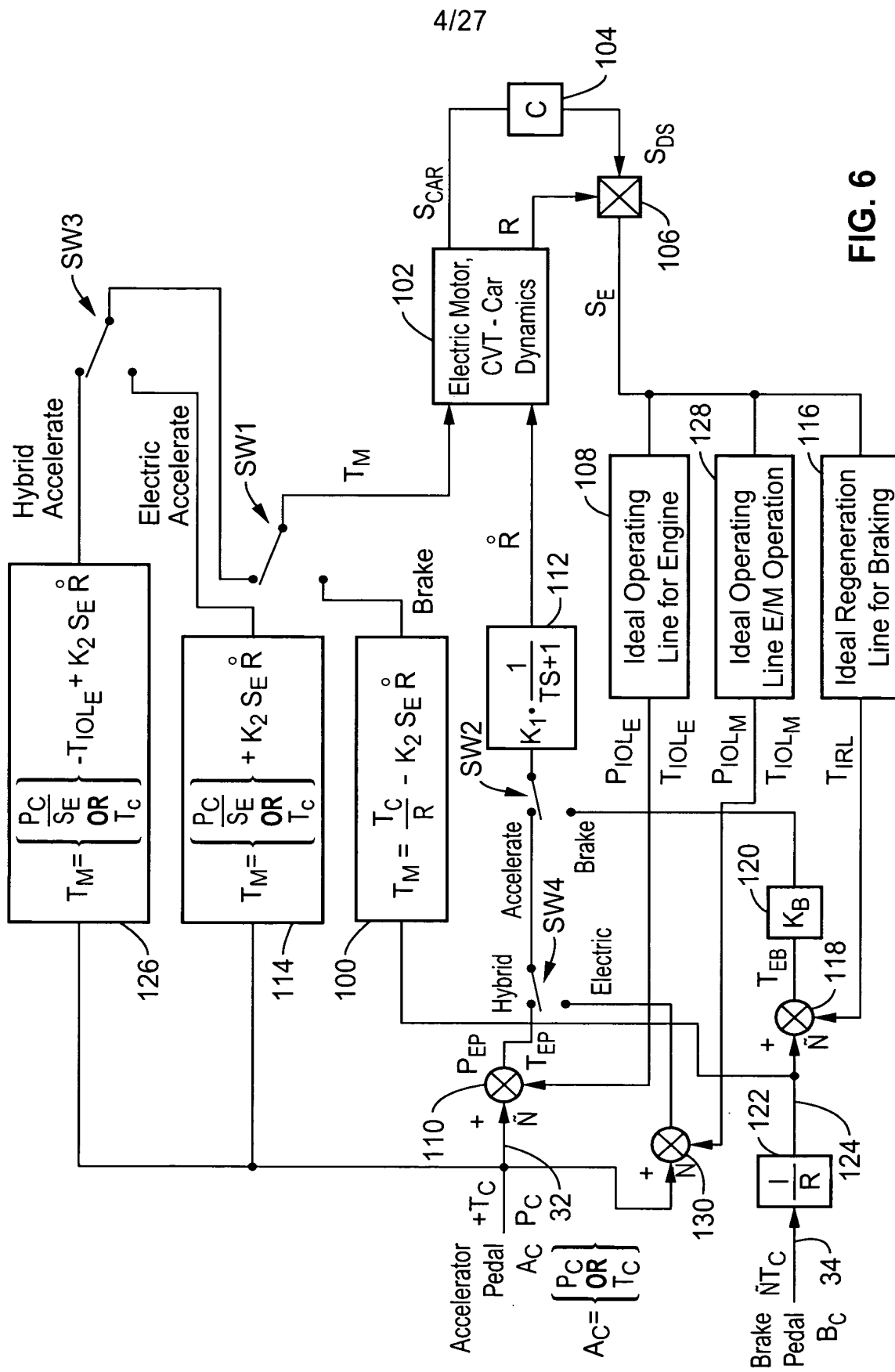


FIG. 6

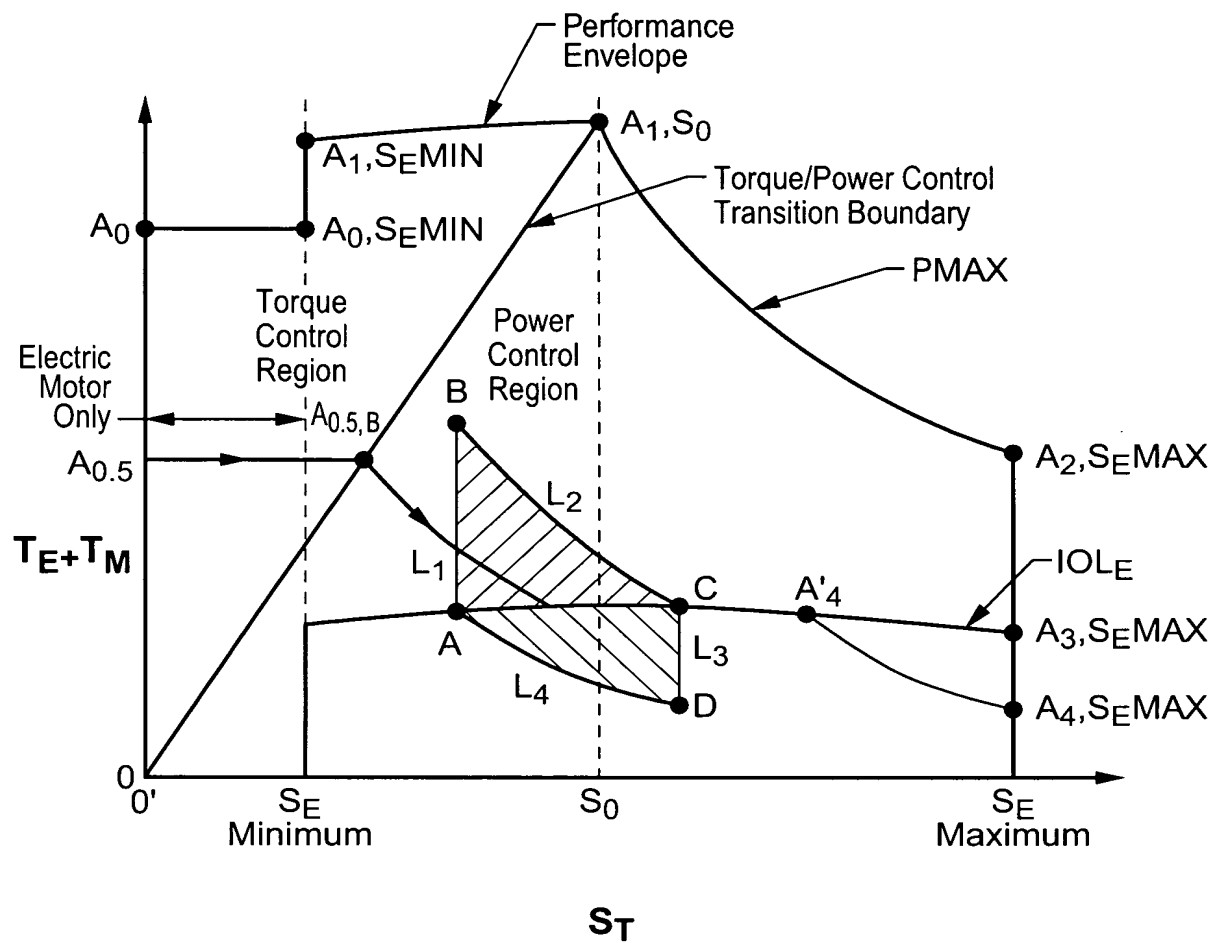


FIG. 7

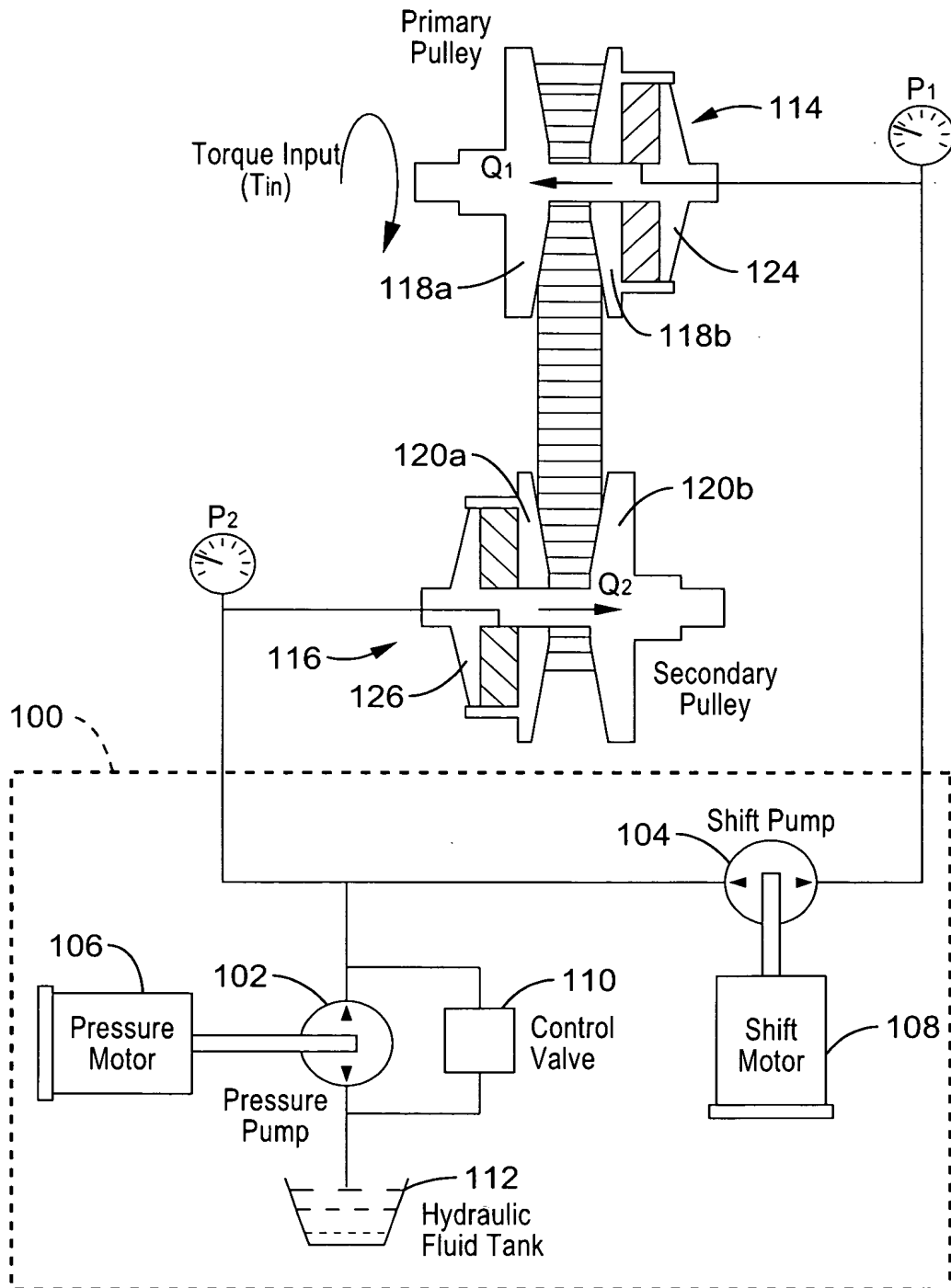
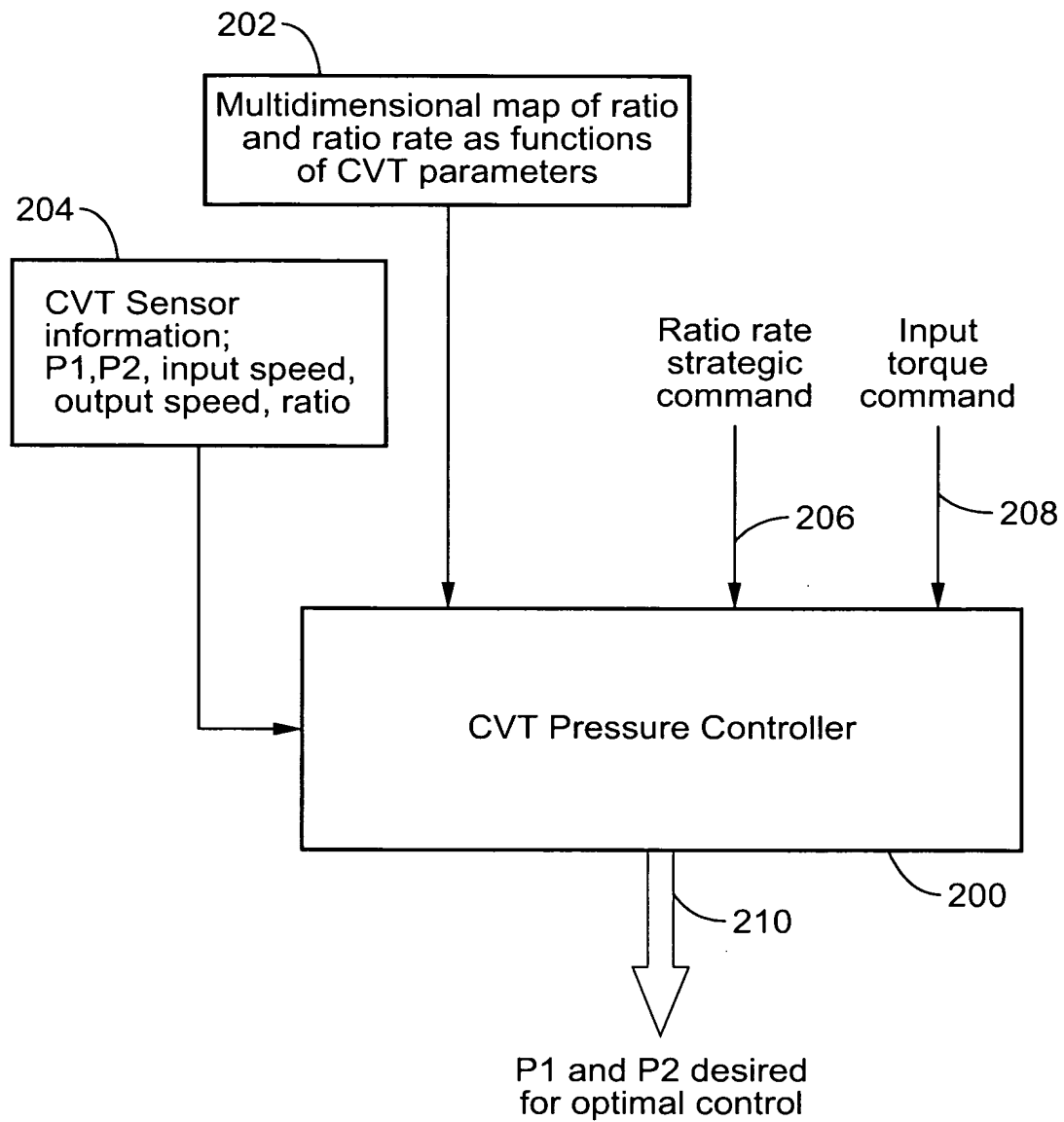
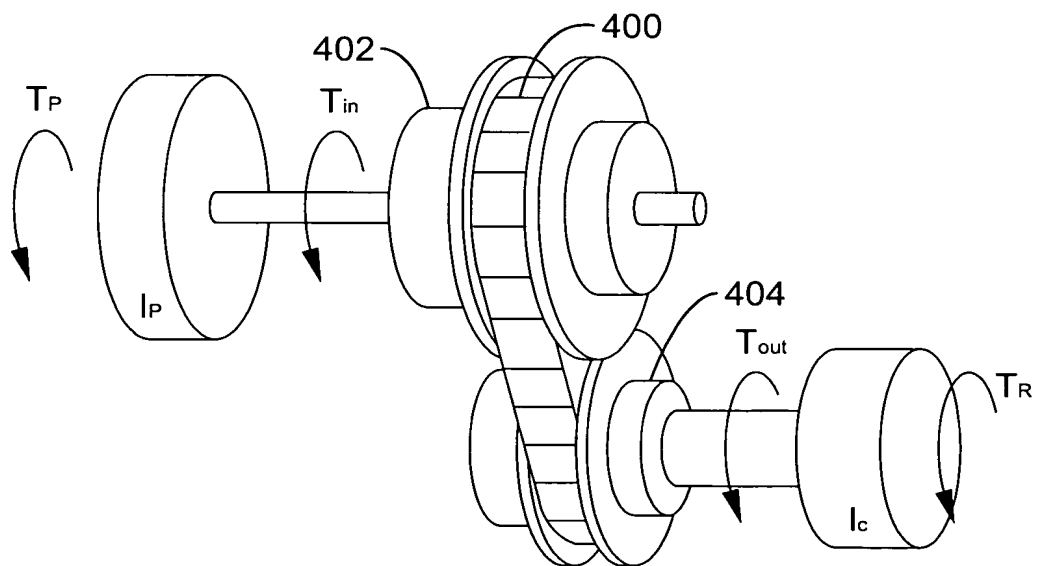
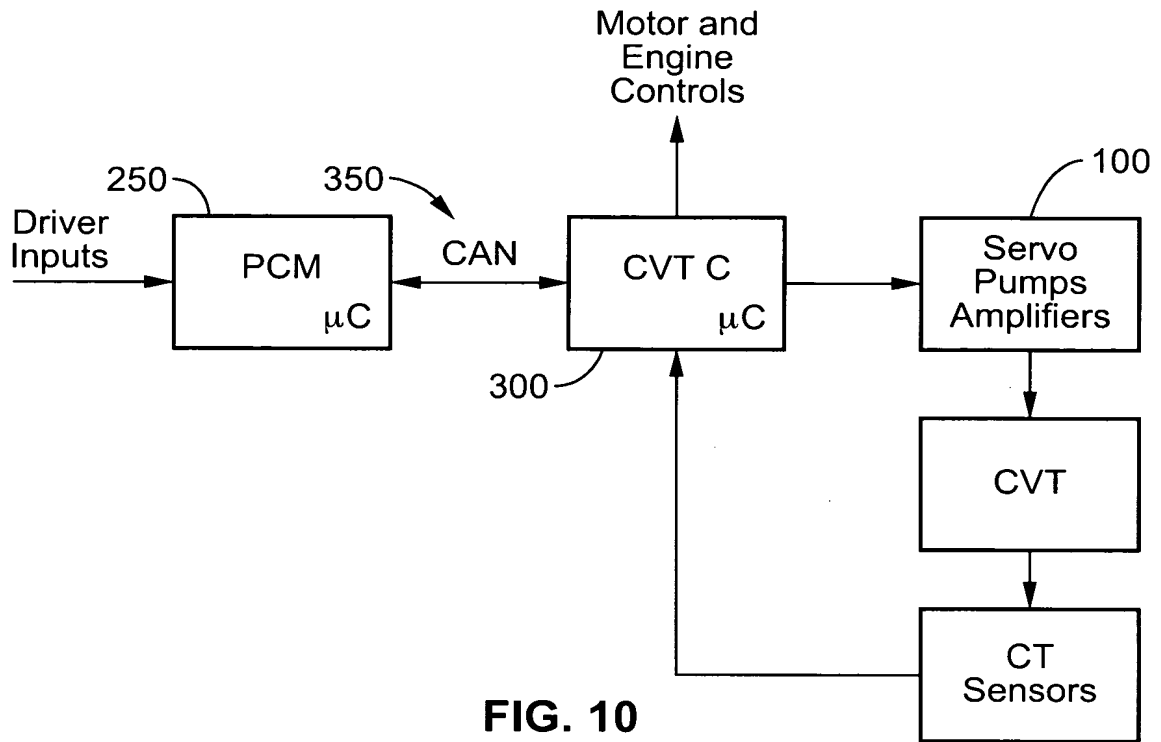


FIG. 8

**FIG. 9**



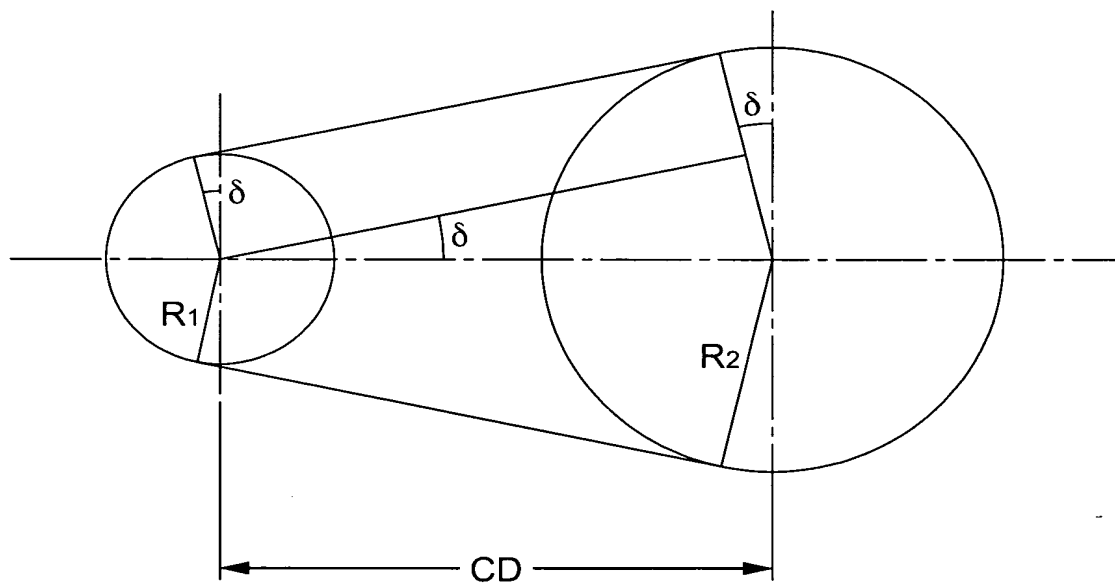
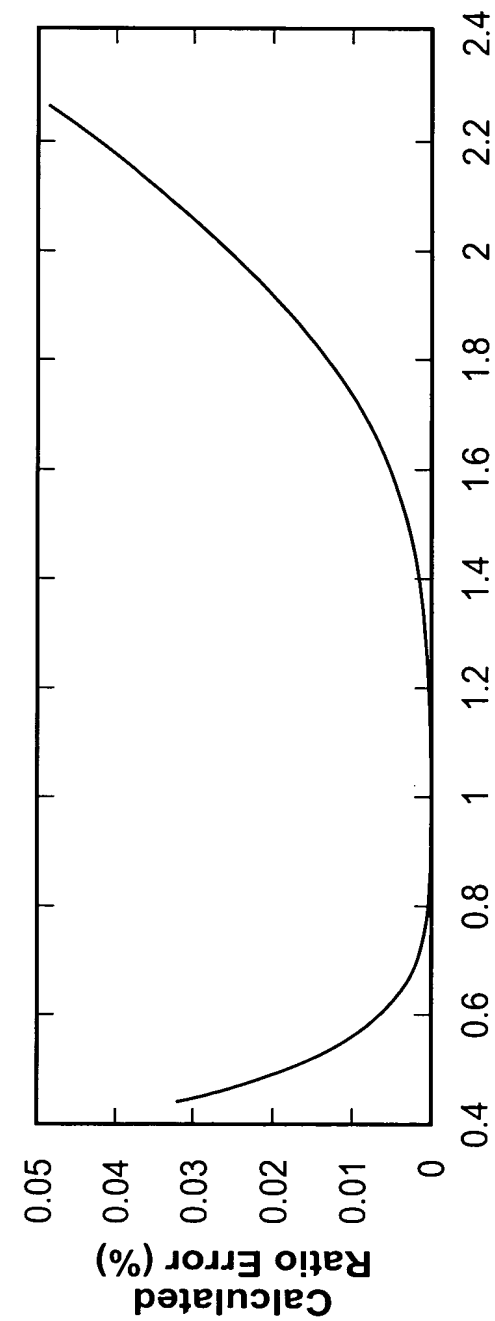
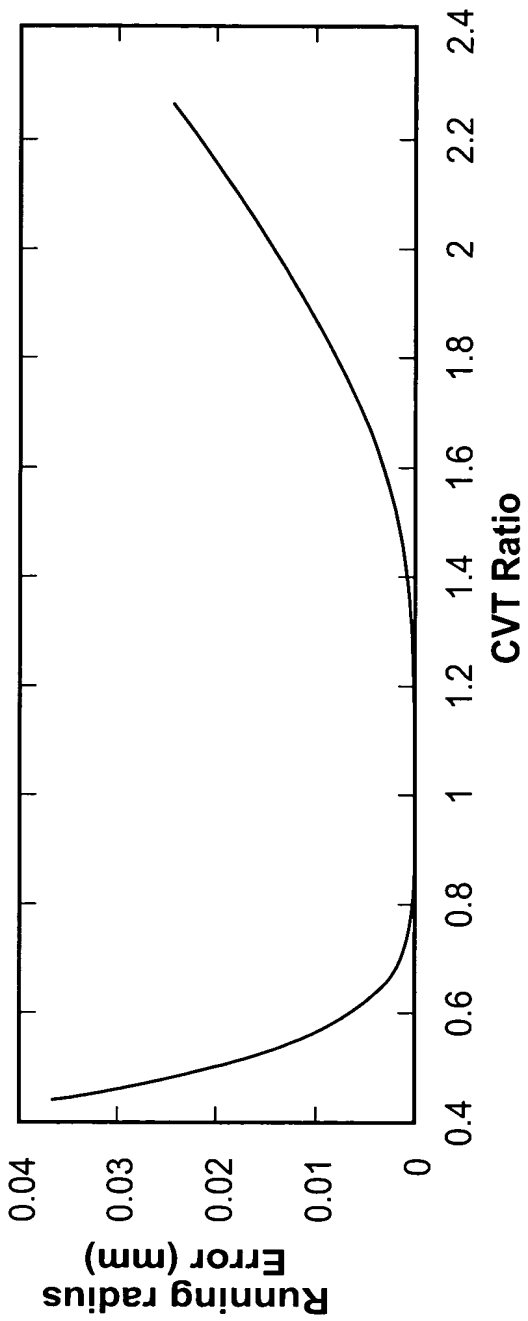


FIG. 12



Errors Introduced by
Second-Degree Approximation

FIG. 13

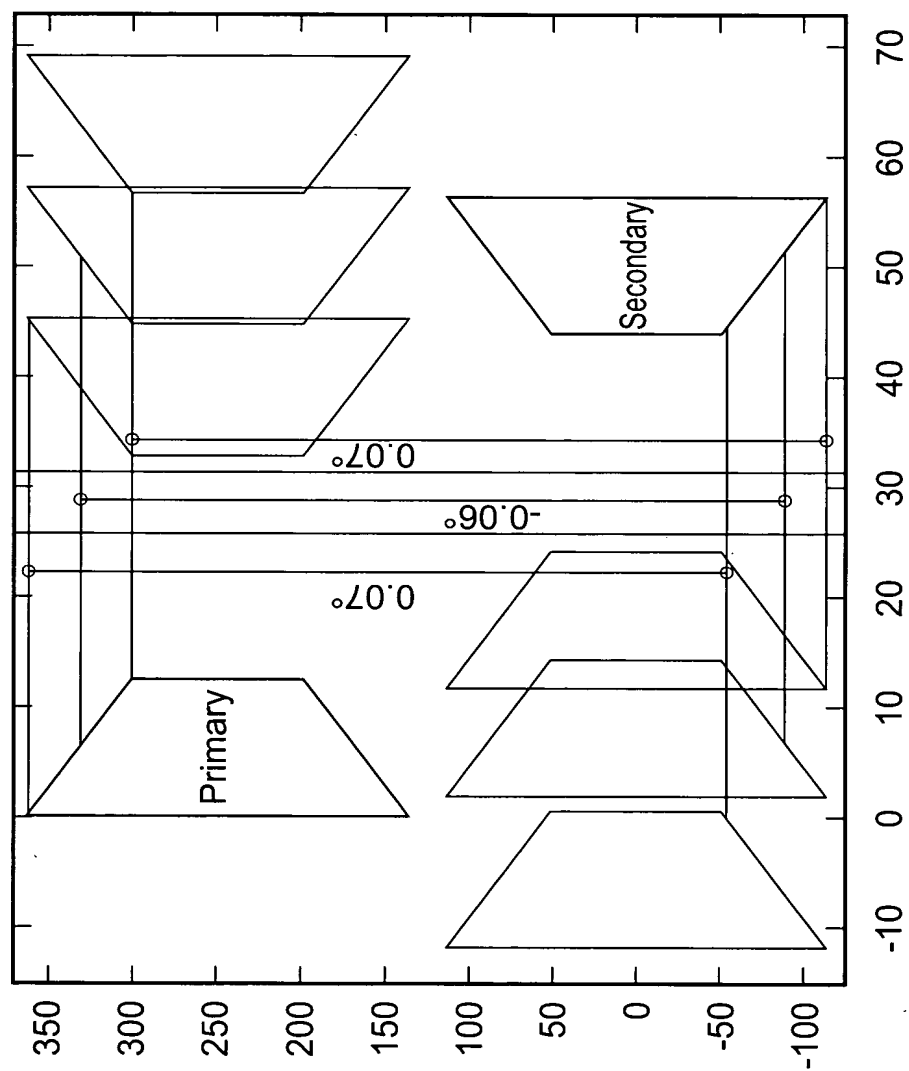


FIG. 14

12/27

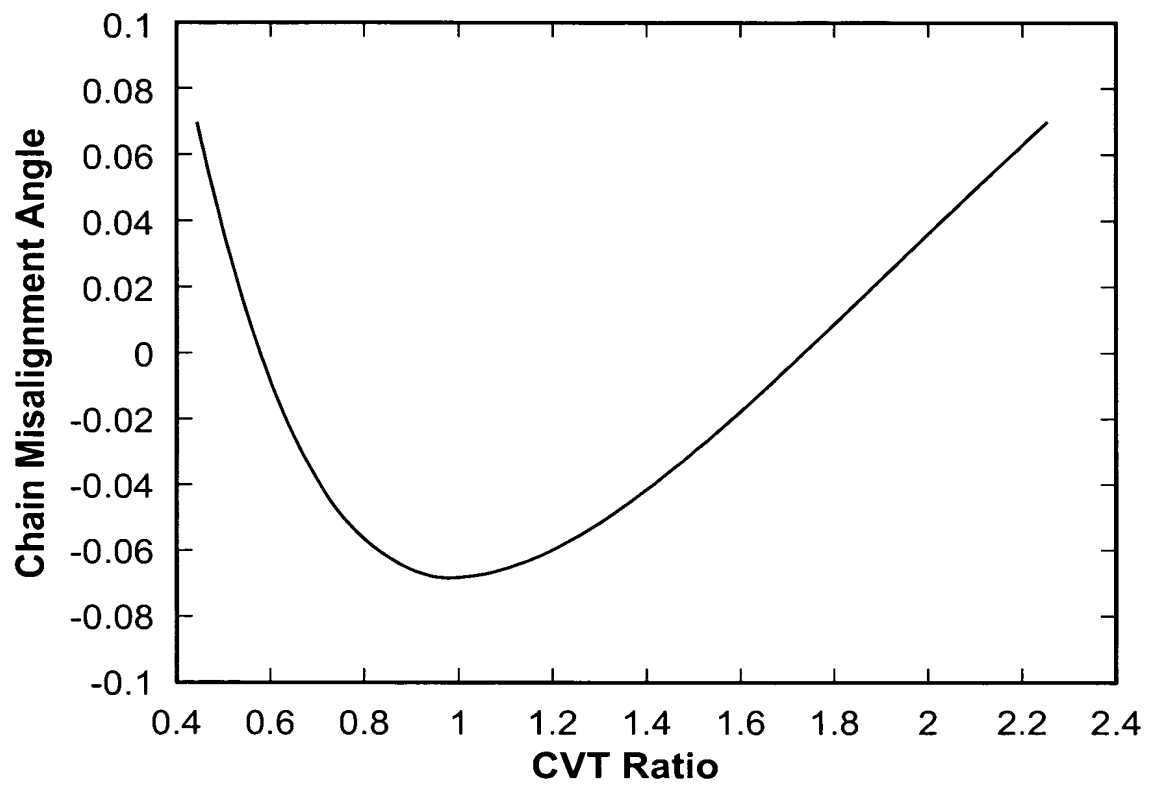


FIG. 15

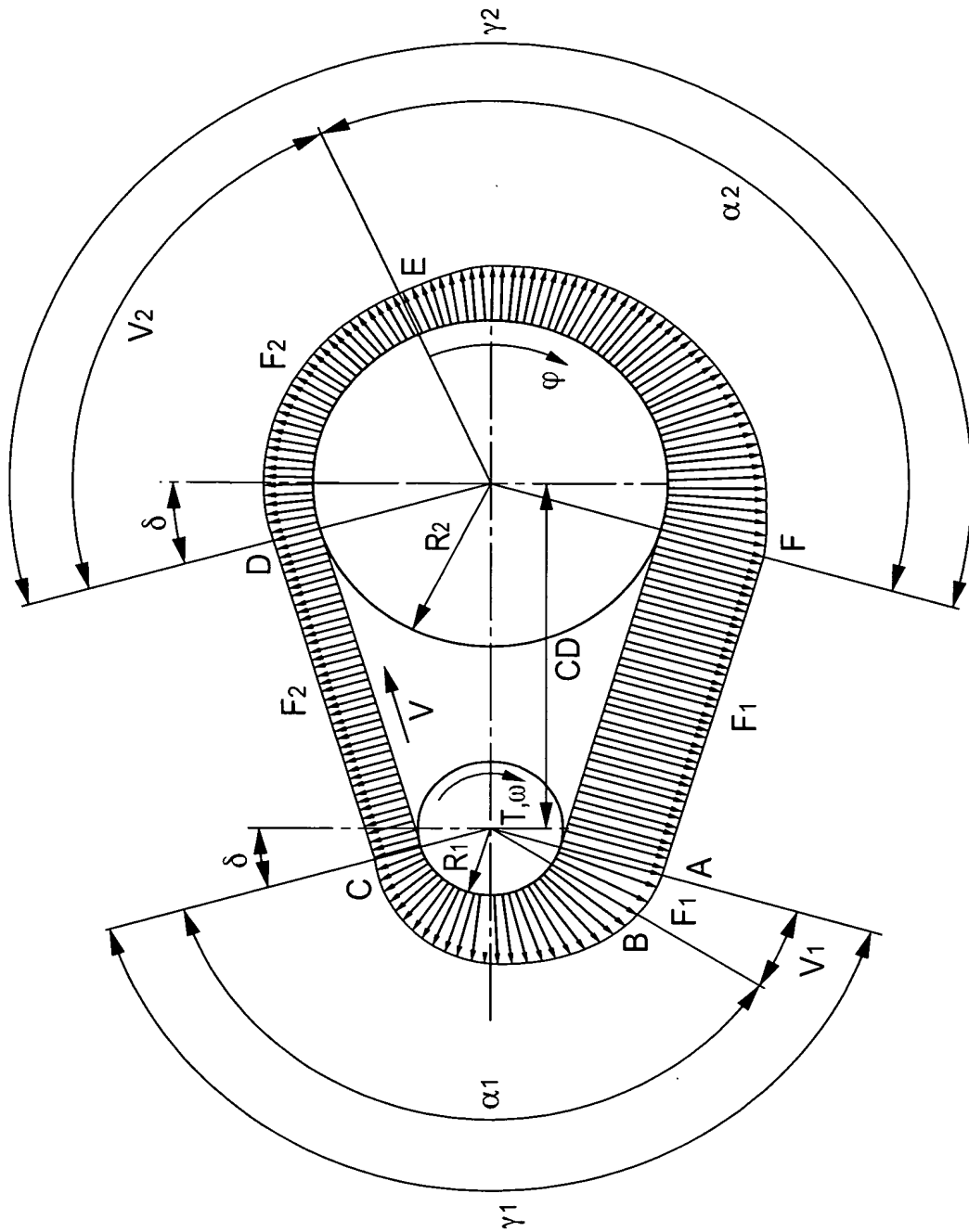


FIG. 16

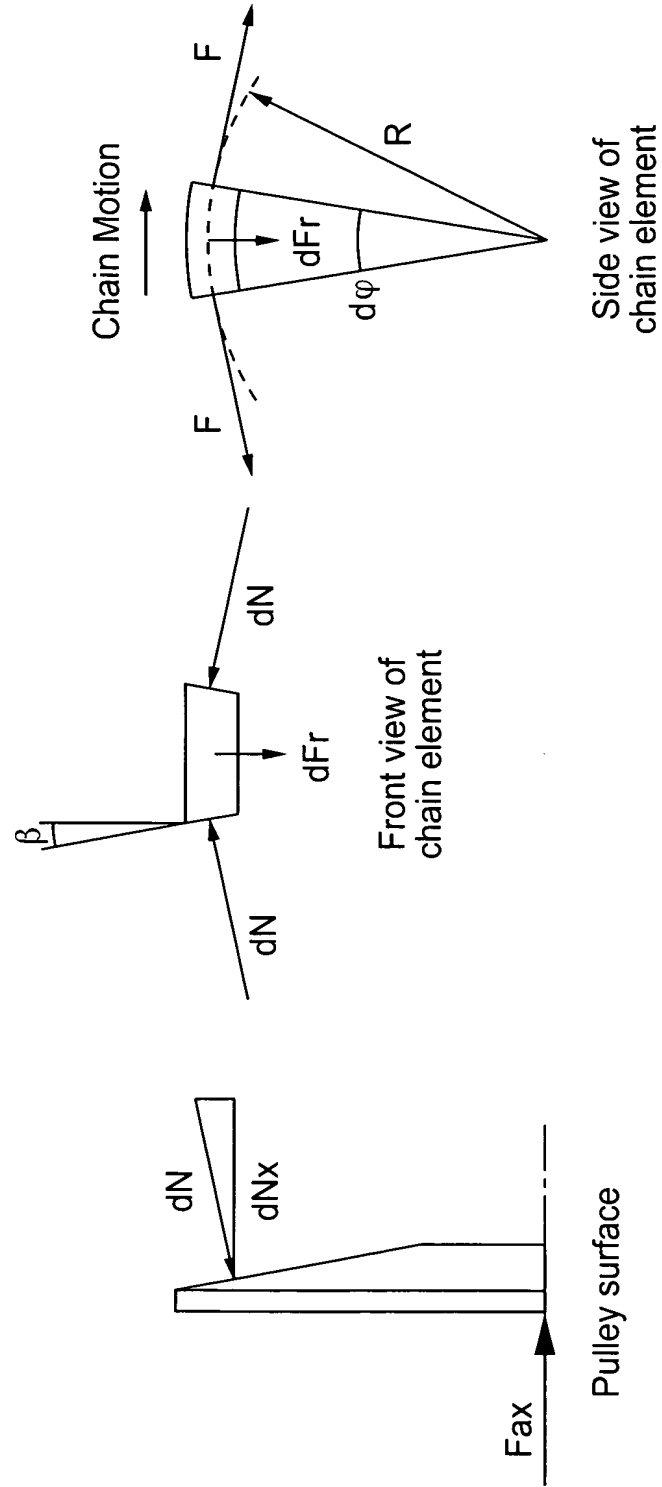


FIG. 17

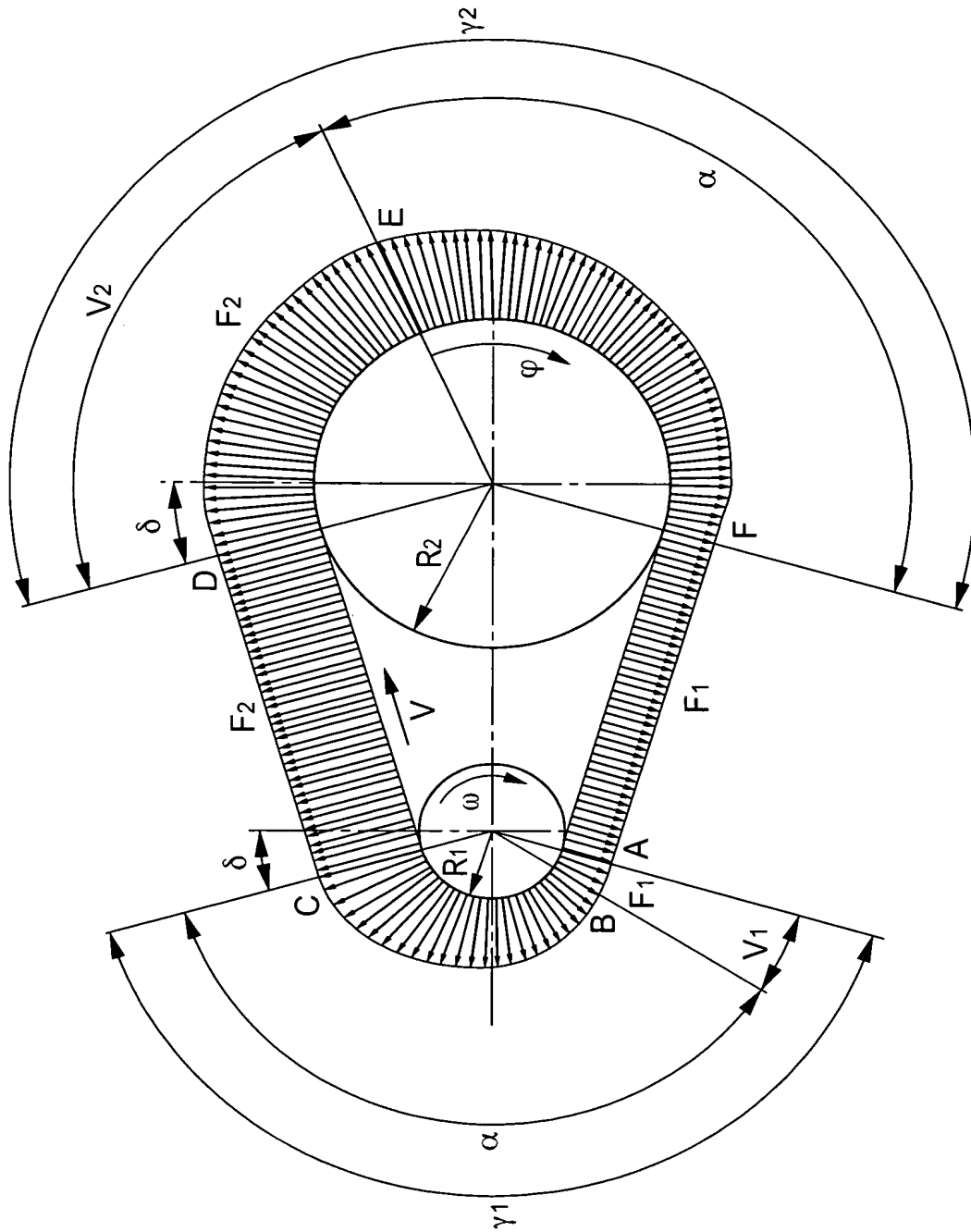


FIG. 18

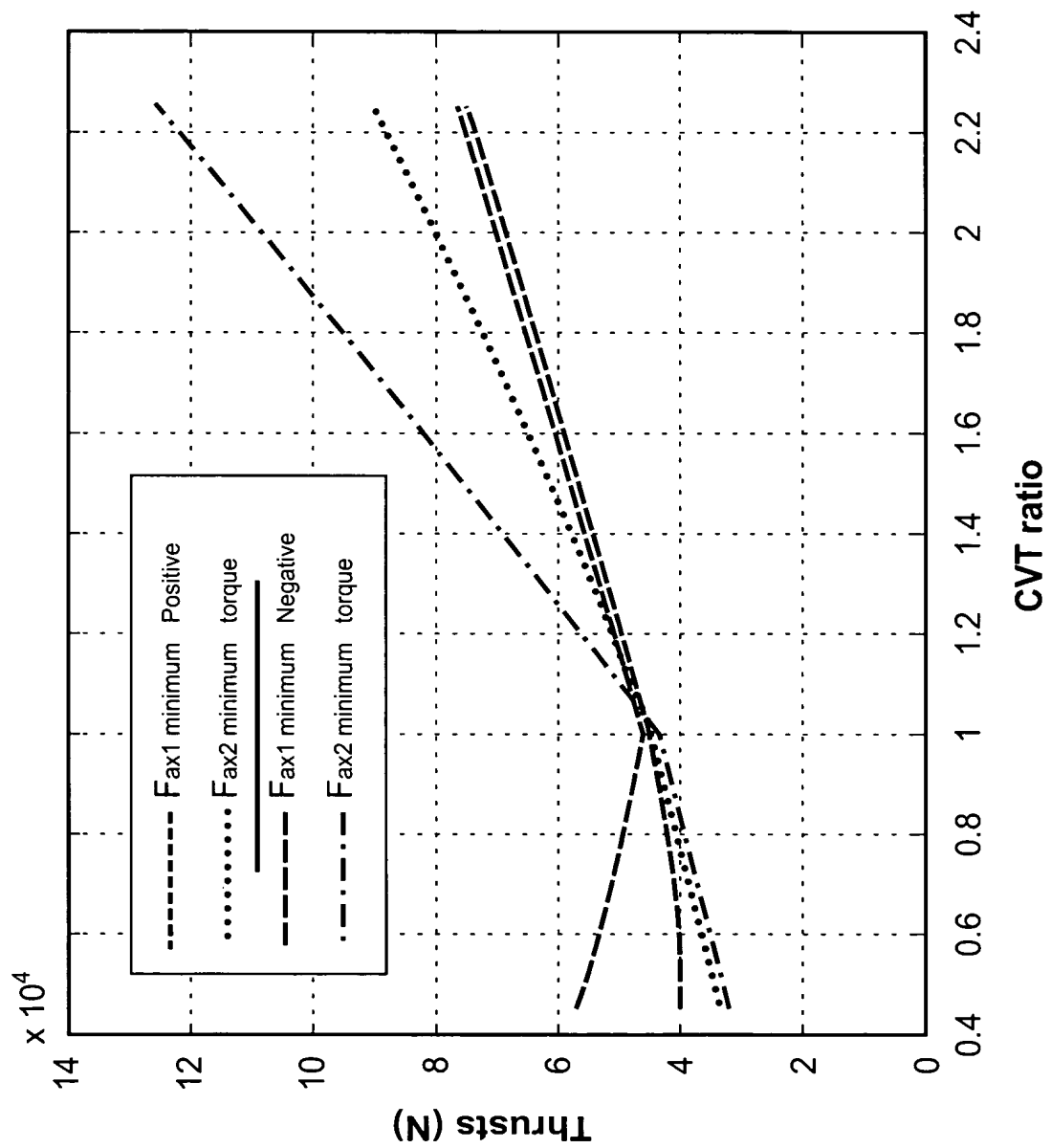


FIG. 19

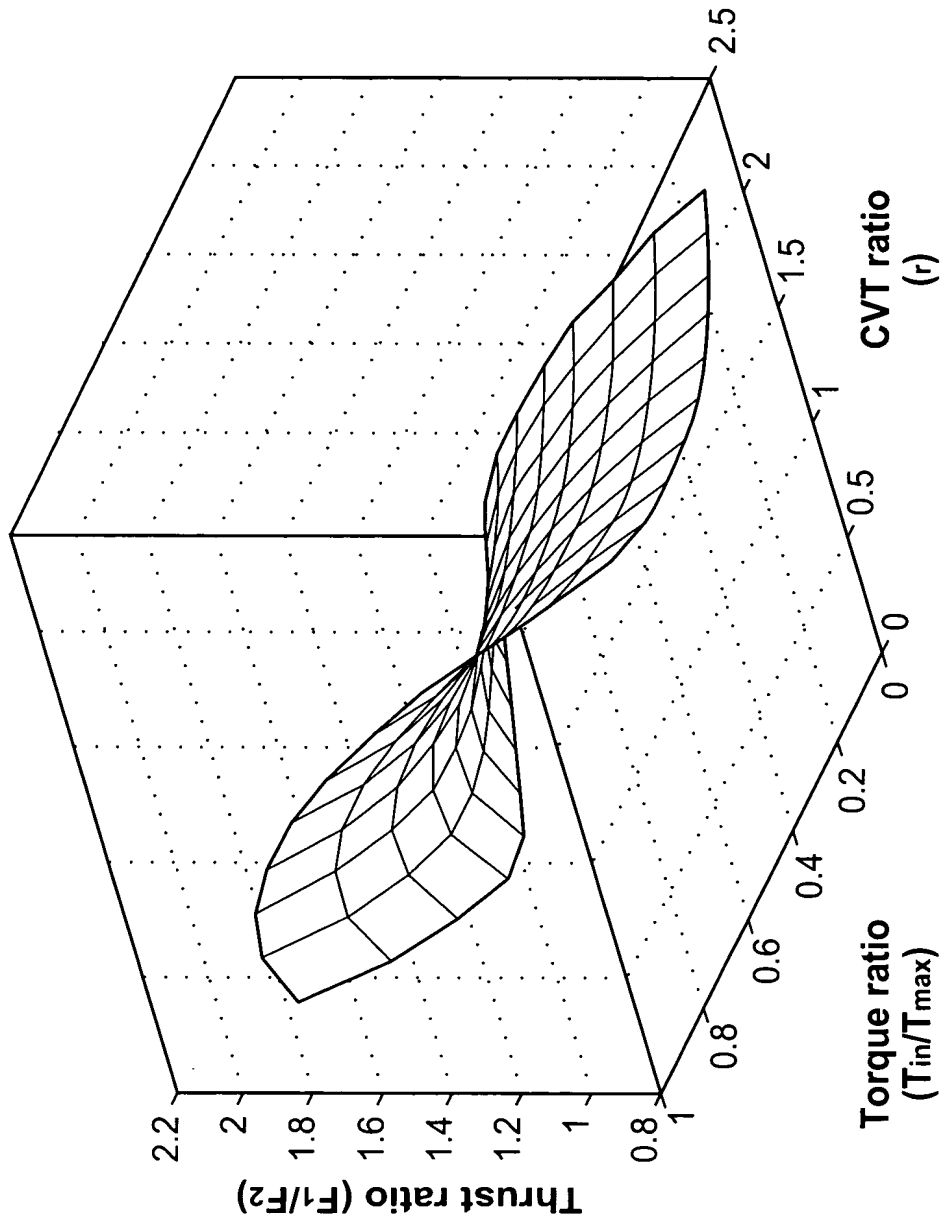


FIG. 20

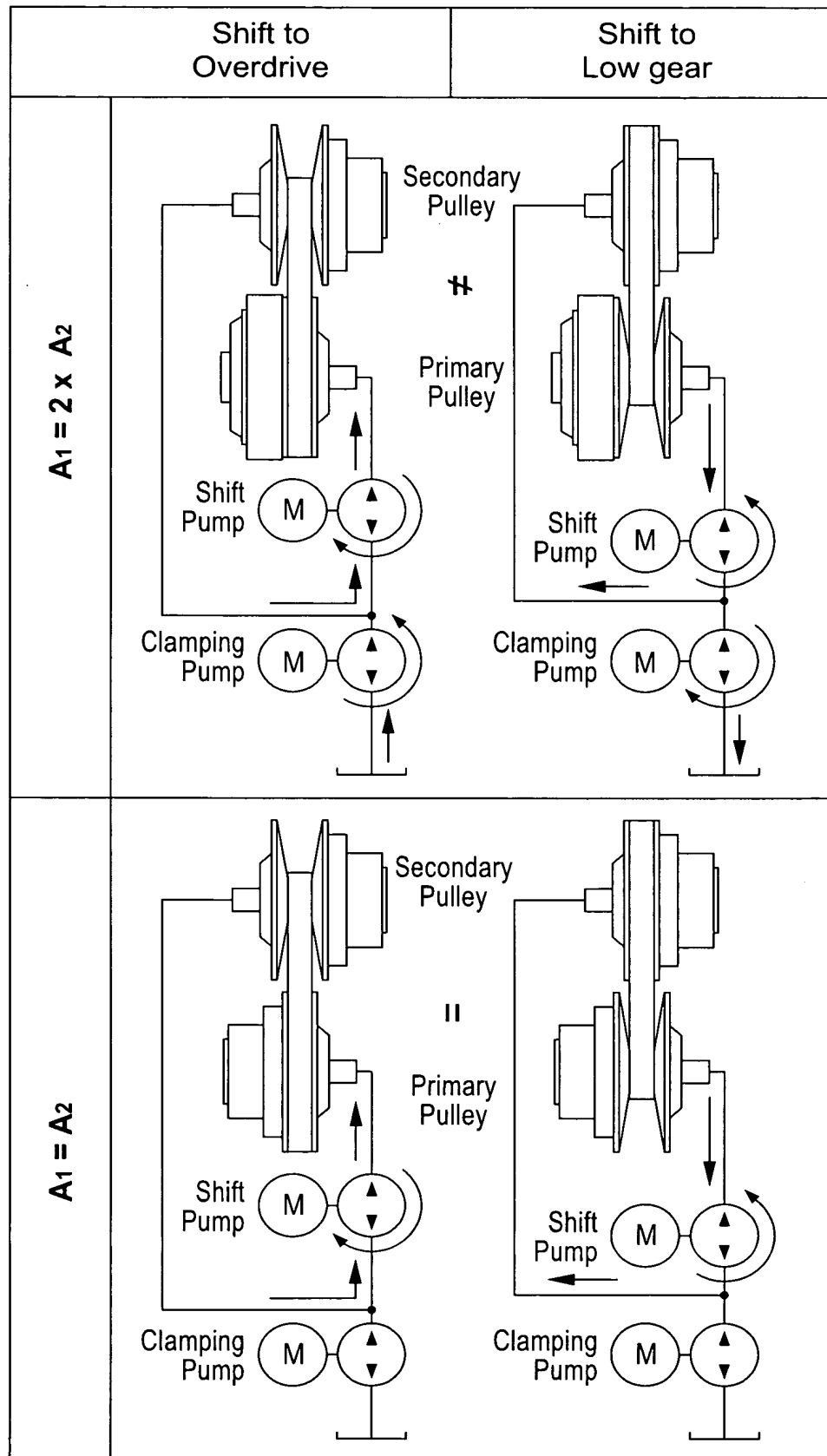
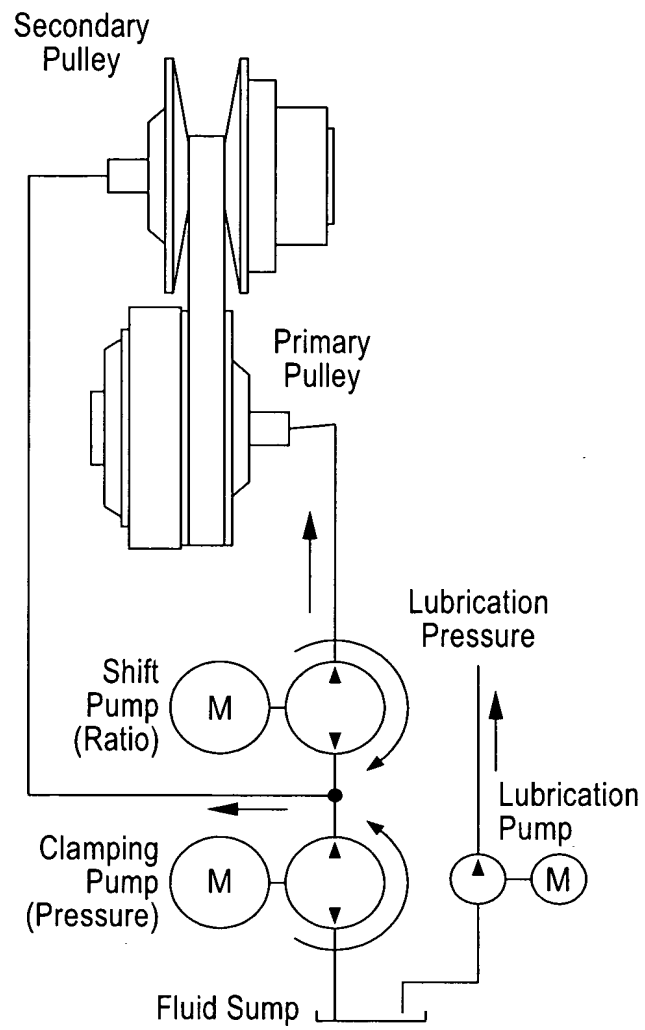


FIG. 21

**FIG. 22**

Data									
P1 (PSI)	P2 (PSI)	Ratio	Tcommand (Nm)	Tavailable (Nm)	In Speed (RPM)	Out Speed (RPM)	Out Torque (Nm)	Dyn Torque (Nm)	EM (%)
126.4	206.2	2.365	53.6	139.6	1906.3	812.1	143.2	104.3	9.7
177.8	204.1	2.163	52.3	149.3	1712.9	805.8	130.3	94.6	9.7
183	208.2	2.02	52.1	161.7	1639.3	814.8	120.4	86.9	9.7
194.1	207.1	1.813	54.6	176.9	1442.7	806.7	106	76.6	9.7
201.3	206.4	1.613	52.2	195.1	1289.7	807.5	93.7	67.5	9.7
207.3	207.8	1.41	52.7	217.7	1140.6	808.4	81.6	58.6	9.7
216.4	207.9	1.21	54	246.5	972.1	803.8	68.6	49	9.7
228.9	211.6	1.01	53.3	287.4	817.9	803.3	56.3	40	9.7

Equilibrium point		
Calc Ratio	P1/P2	Tq ratio
2.347	0.613	0.320
2.126	0.871	0.292
2.012	0.879	0.269
1.788	0.937	0.257
1.597	0.975	0.223
1.411	0.998	0.202
1.209	1.041	0.183
1.018	1.082	0.155

Calculated ratio = Input speed / Output speed

Pressure ratio = Primary pressure / Secondary pressure

Torque ratio = Torque command / (Torque available * 1.2)

The torque available is multiplied by 1.2 because of the factor of safety used in the control algorithm

FIG. 23

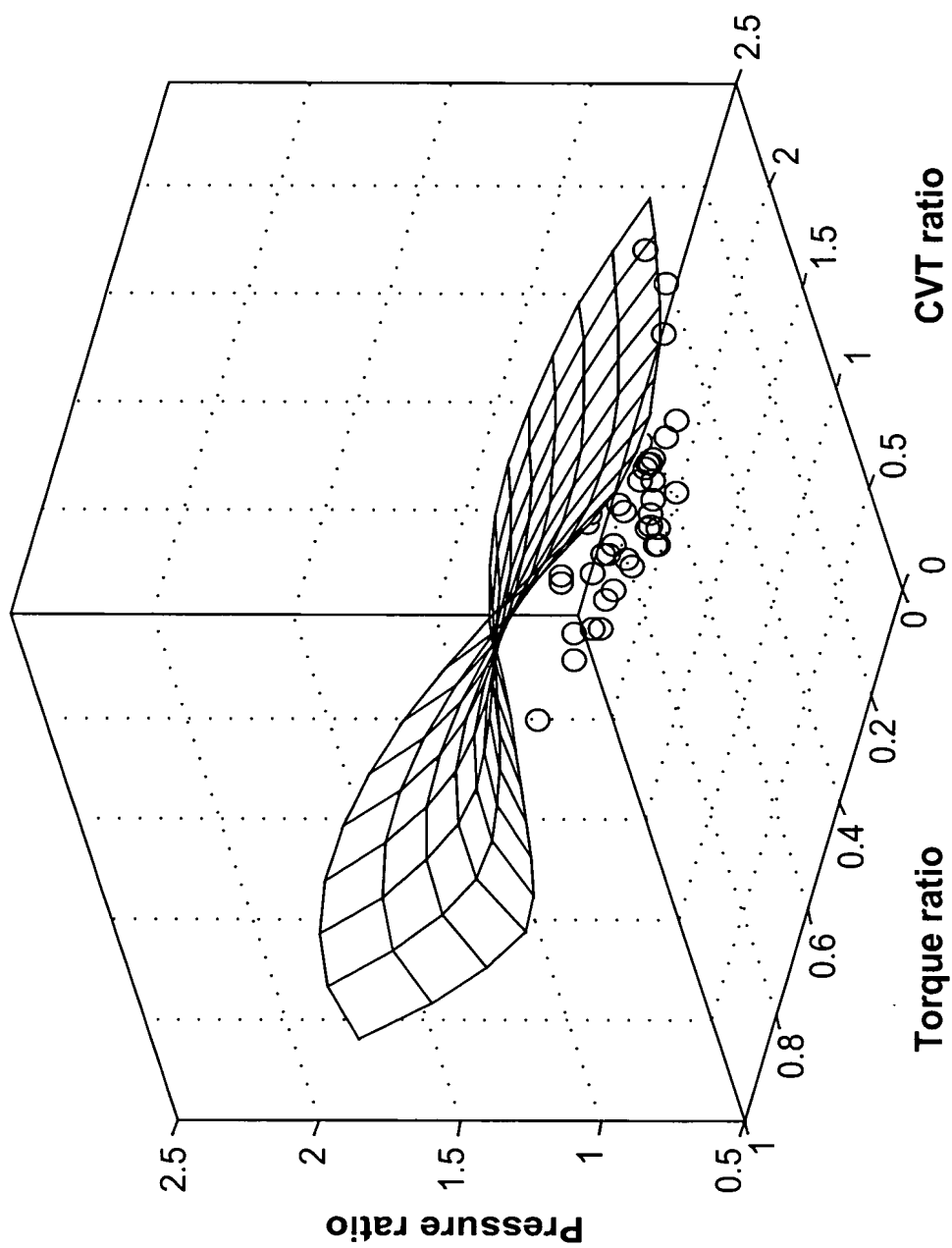


FIG. 24

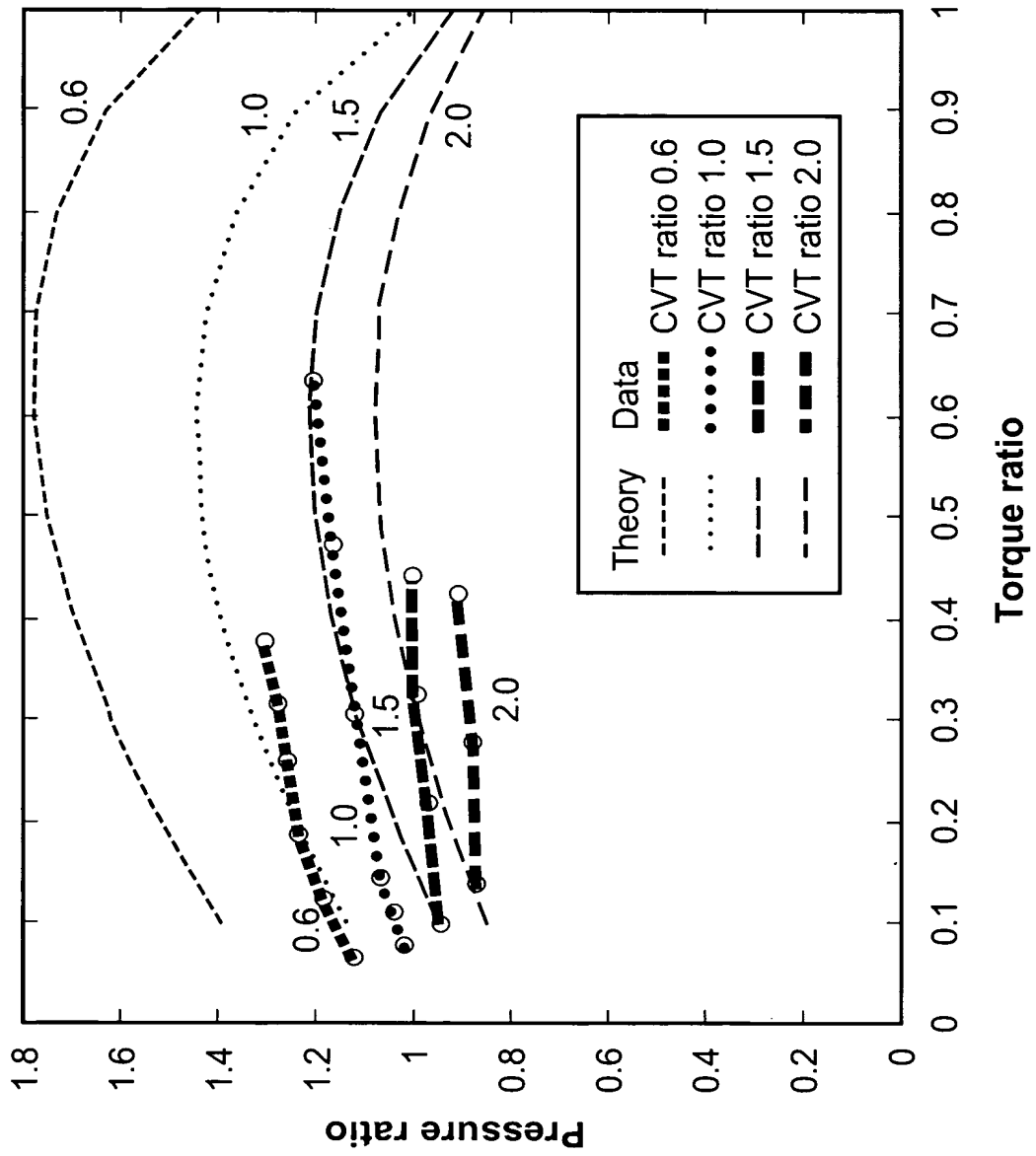


FIG. 25

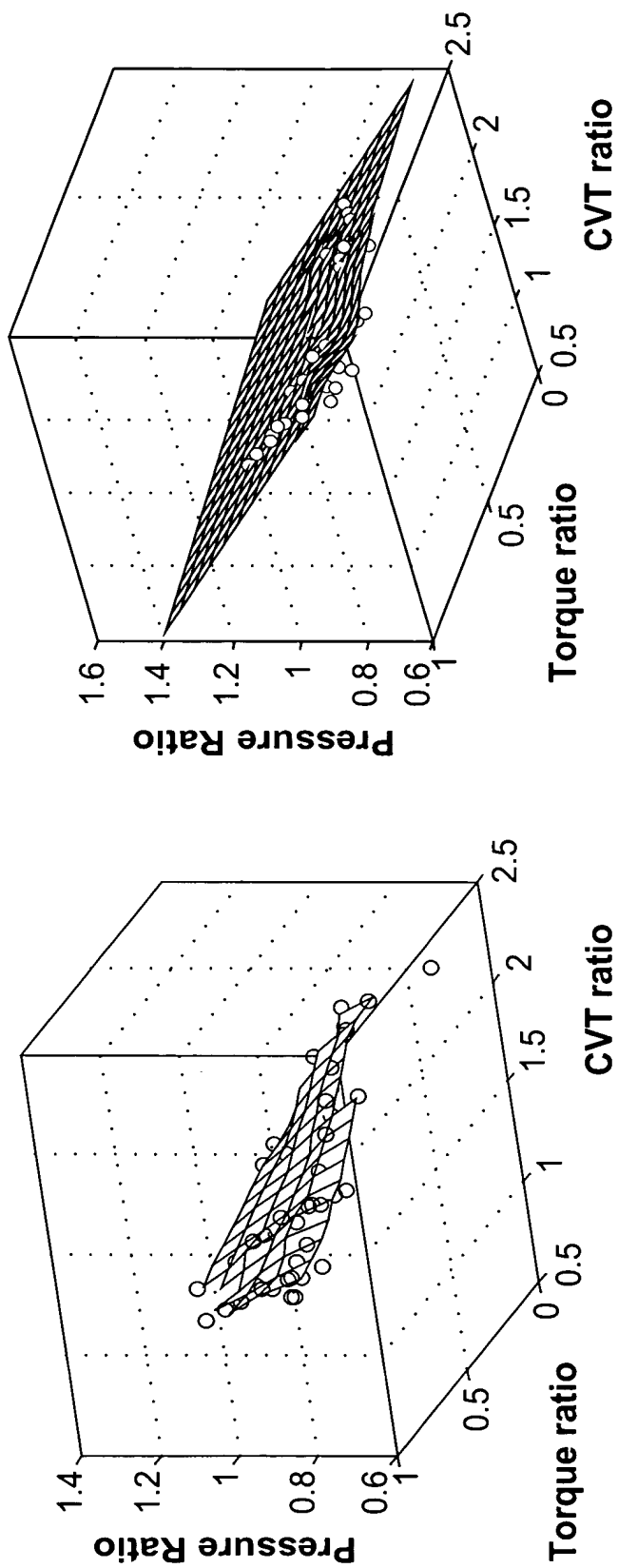


FIG. 26



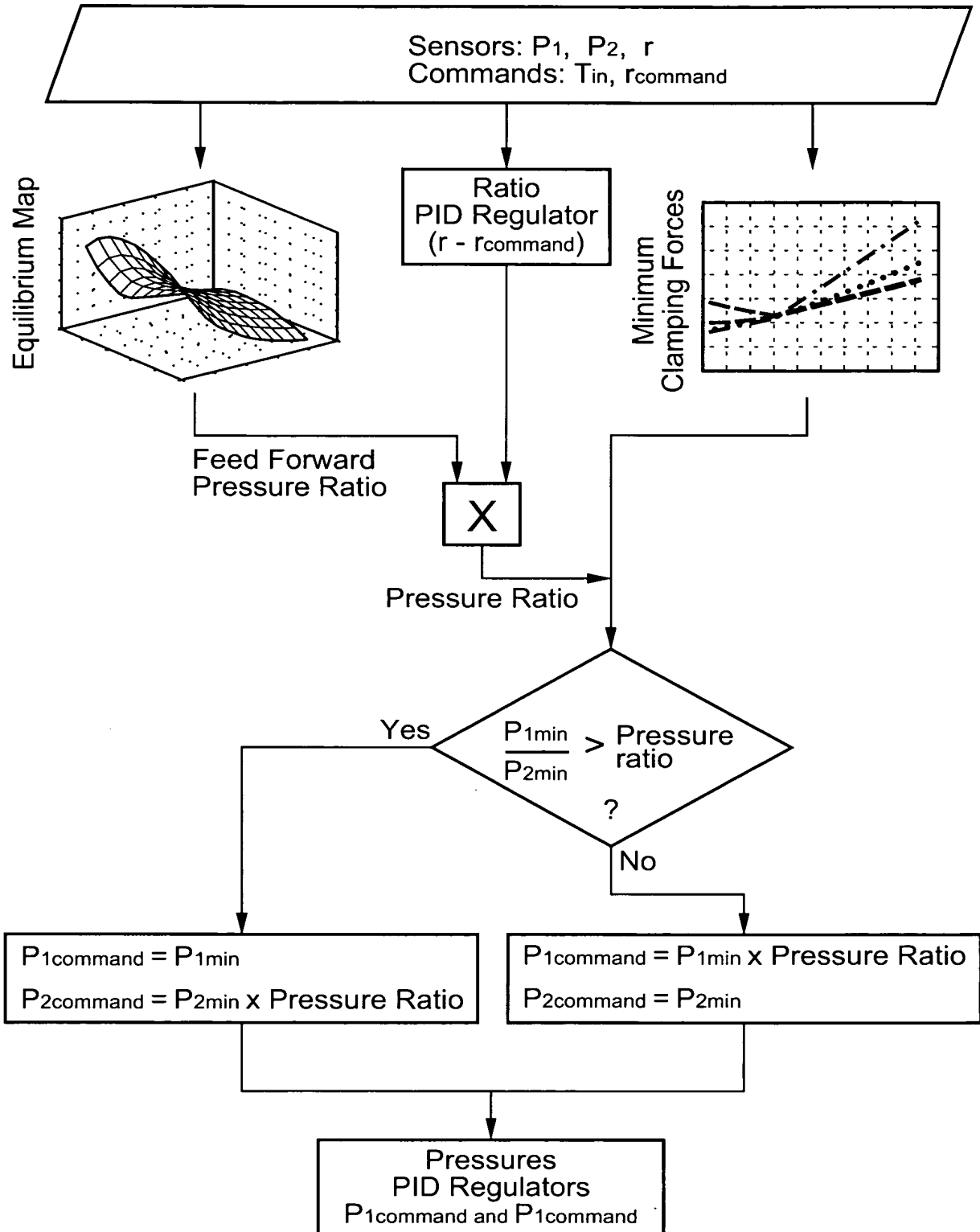


FIG. 27

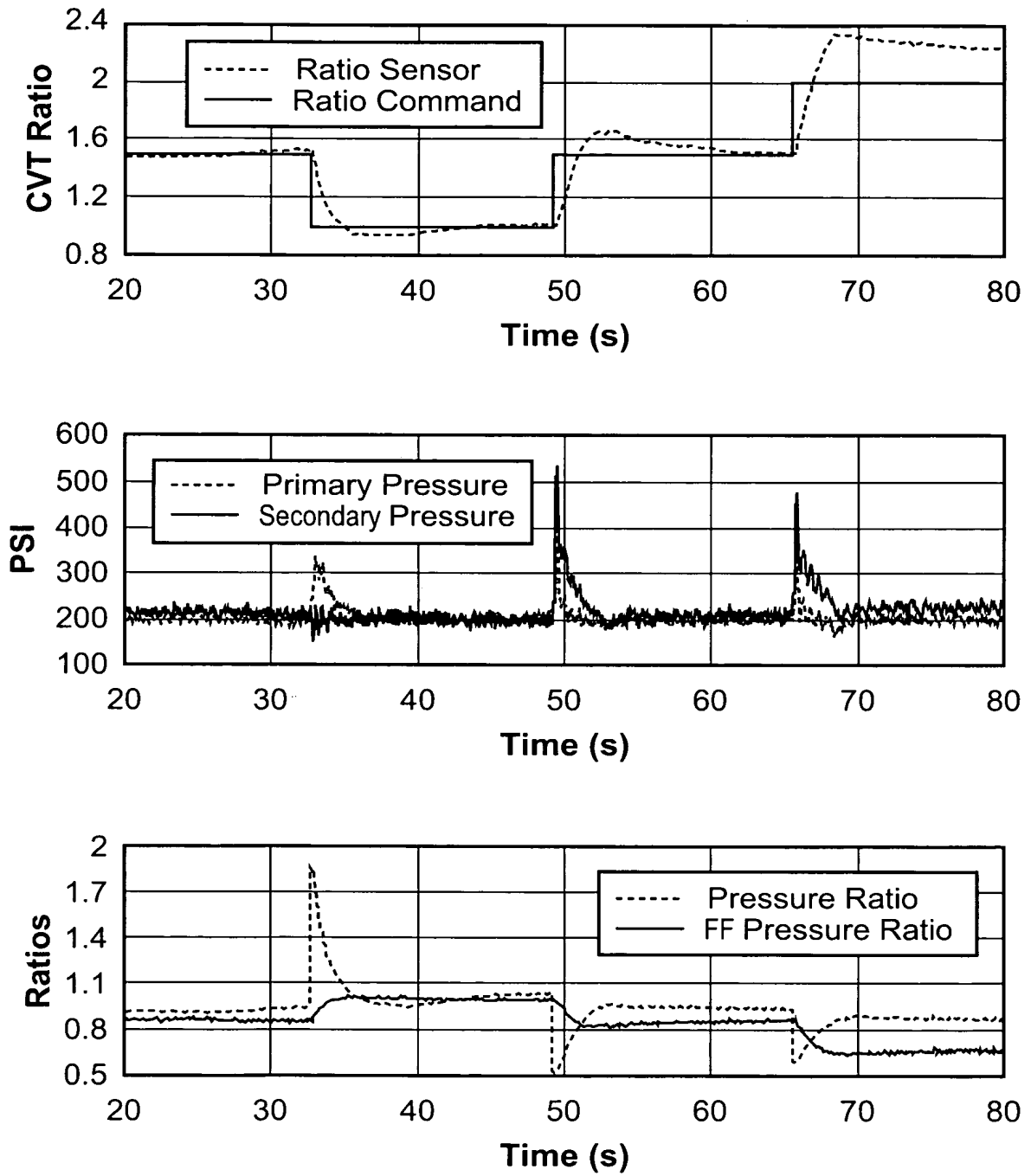
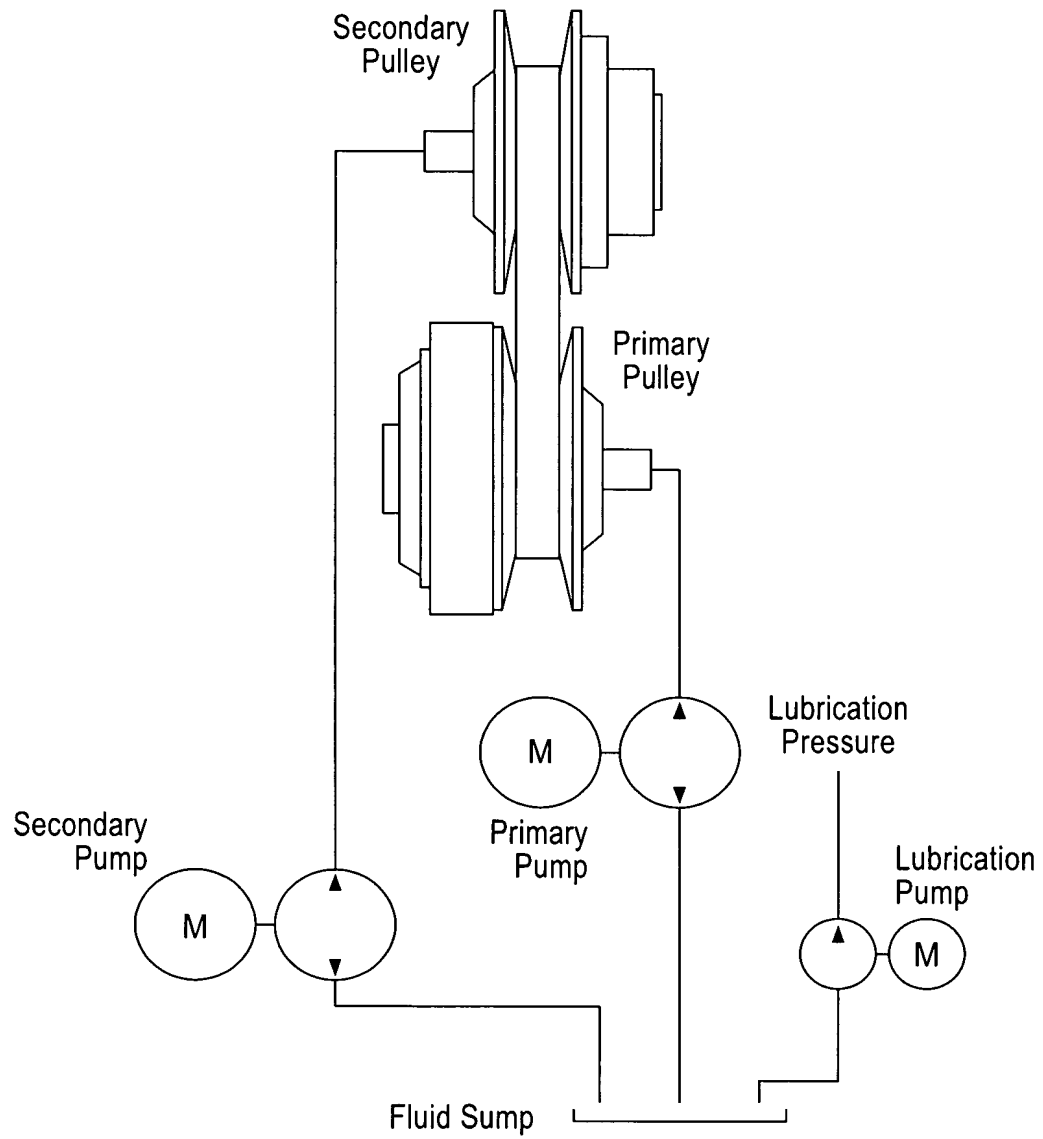


FIG. 28

**FIG. 29**

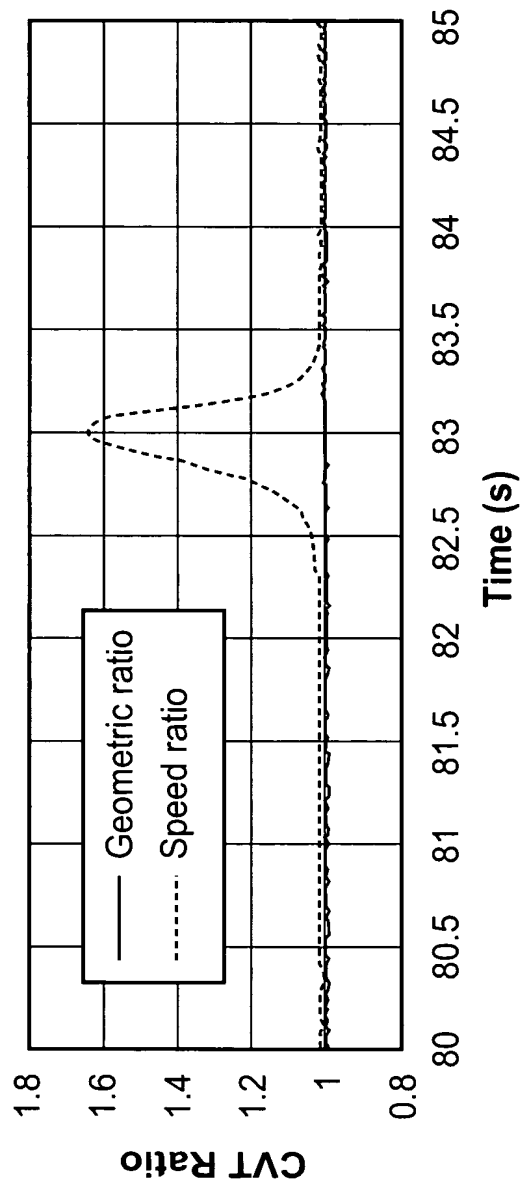
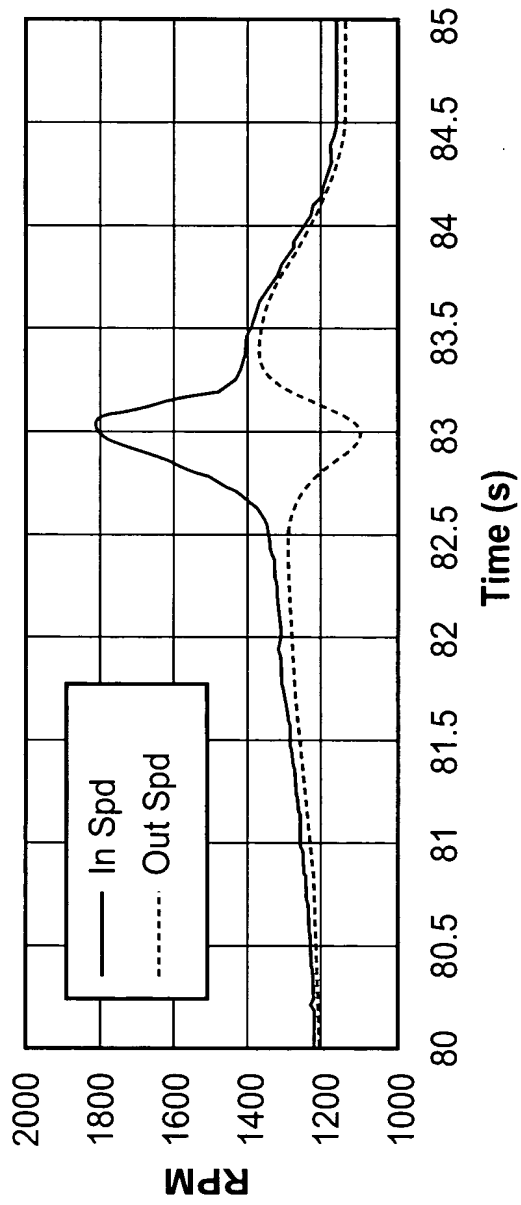


FIG. 30